India-rubber, spread upon calico, or other material, by a stiff brush, or by a knife, be used as adhesive plaster, it will be found to answer far better, in almost every case, than any other adhesive material, as it sticks firmly, is pliant, produces no irritation to the skin, and will bear lotions, or washing over it. It is also most valuable in cases where the skin requires a soft plaster of an unirritating nature for its defence, as in old persons, or others long confined to bed. In such cases, it is better to use either soft leather or the vulcanized India-rubber, made in thin sheets; the latter, from its elasticity, is often the best, as it stretches with the skin on every movement of the body. To many kinds of wounds, from operations or otherwise, strips of thin vulcanized India-rubber, spread with the liquid, will be found invaluable as elastic adhesive plasters, as they become firmly attached to the skin, and give way to all its movements. But should any wounded part require a portion of the plaster to be non-elastic, as in the case of operation for hare-lip, &c., then, in order to secure such part from being stretched, a short piece of calico, about an inch in length, should be stuck upon the middle of the elastic plaster, by which means that portion would become stationary.

If a circular piece of thin vulcanized India-rubber, about two inches in diameter, be spread with the liquid, and applied on the abdomen of an infant having umbilical hernia, and a common bandage, such as is generally used for infants, be passed lightly round the body, the protrusion will be instantly checked; and if the same plaster be again spread with the liquid and re-applied, when it comes off from time to time, no trouble will be experienced by the infant. It is not necessary to use any pad or compress.

The liquid, which is like thick treacle, and the vulcanized India-rubber, may be procured in most large towns. (They are manufactured in Manchester, by Charles Mackintosh and Co.) In most cases, the thin sheet of the vulcanized India-rubber, or that sold as No. 50, will be the most suitable; in other cases, the thicker, or the No. 36, will be advisable.

The most convenient method of carrying the liquid is in one of the small, compressible bottles, used by painters, holding about an ounce, so that on removing the screw-cap, any required quantity can be squeezed out.

The above statement will give a general idea of the subject; the materials may of course be used in a vast variety of forms.—*Lancet*, Feb. 19.

MEDICAL PATHOLOGY AND THERAPEUTICS AND PRACTICAL MEDICINE.

15. *Observations on "Ochlesis," or the Disorder generated by the Accumulation of the Sick.* By Geo. Gregory, M.D. (Proceedings of Roy. Med. and Chirurg. Soc., June 27).—The object of this communication is to give a brief sketch of the evils which result from the accumulation of a vast number of sick persons under one roof. The author designates the general condition of disease produced under these circumstances by the term "ochlesis," derived from οχλος, a crowd. The normal type of the disorder is erysipelas of the face; but there are a vast number of allied affections which appear at different times with it, either separately or in combination. These are, erysipelas of the extremities, especially affecting wounds or sores; trails of erythematous redness, following the course of the chief absorbent trunks, and terminating in abscesses; cellular inflammation of the lower limbs, or phlegmasia dolens; cellular inflammation of the neck, leading to abscess, cynanche, otitis, glossitis; inflammation of the joints, terminating in purulent effusion; spontaneous gangrene of the genitals and of the extremities; gangrene supervening upon wounds or sores; spontaneous gangrene of some portion of the trunk of the body, especially in new-born children; gangrene of the umbilicus. Instances of pure fever, of a low type, from the same source, are not uncommon. Diarrhœa sometimes is the result, from the mucous membrane of the bowels becoming affected; and in the wards of lying-in hospitals, the "ochletic" miasm expends all its virulence on the peritoneum. The author has seen an asthenic form of laryngitis produced by the same cause, and believes that the pneumonia which springs up in hospitals has likewise its source in the contagious ochletic

miasm. This miasm, too, he thinks, produces the excessive depression which attends the worst cases of sea scurvy, and he has seen it occasion, in the Small-pox Hospital, a state resembling, in all respects, scurvy itself. All the disorders originating in the ochletic miasm are characterized by a low condition of the vis vitæ, and intractability. The experience of the Small-pox Hospital during many epidemic visitations, especially in the years 1842, 1844, 1847, and 1848, has convinced the author of the fact, that all the diseases which he has enumerated may arise from the same miasm. Contagious peritonitis is, perhaps, the only form of the ochletic malady that he has not seen at that hospital during the last twenty-five years; but he regards it as quite certain that this is "part and parcel" of the same disease. The chief agent in the production of ochlesis is, certainly, the crowding together of the sick in one spot; but matters are made much worse by unfavourable locality, by dampness of the surrounding soil, imperfect drainage, or choked sewers, by deficient ventilation, by the character of the cases congregated, by neglect of personal cleanliness, by the employment of unpurified bedding, and by inefficient purification of the wards. Since, however, the ochletic miasm is evolved only at certain times, a peculiar, but unknown, condition of the atmosphere must concur towards the actual result. The ochletic miasm appears to attach itself strongly to the walls and floor of the apartment—hence the use of covering the floor with a mixture of quicklime and water, of lime-whiting the walls, of fumigating with nitric acid or chlorine, &c. The great means of checking the development of ochlesis, however, is to restrict the admission of patients, and to leave the infected ward unoccupied for a certain time.—*Lancet*, July 17, 1848.

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16. *Cases illustrative of some consequences of Local Injury.* By Thomas Hodgkin, M.D. (Proceedings of Roy. Med. and Chirurg. Soc., June 27.)—The cases detailed are divided into two groups; the one, in which the effects had more or less the character of common inflammation; the other, distinguished by the production of an adventitious structure having the character of malignant disease. The following is an outline of the first of three cases included in the former group:—

R. M——, about forty-five years of age, an active man of business, of spare habit, but enjoying nearly uninterrupted health, had, rather more than two months before his death, fallen upon the edge of the curb-stone, in one of the streets of London, but was not sensible of having received much injury. About six or seven weeks afterwards he was exposed to wet and cold, after being heated and fatigued. In the evening he was chilly and distressed, and felt severe pain in the right side. He went out the next day, and was again exposed to wet and cold, but after this was confined to the house. A blister was applied to the seat of pain, and aperients and effervescing salines were given. He complained no more of pain in the side, but remained feverish and weak. Two half-glasses of claret produced a most disproportionate mental excitement, which returned in paroxysms. In a day or two after this he passed into a state of coma, with a very rapid, feeble pulse. Ammonia was given. He revived, and complained transiently of a little pain in the left arm and leg. A small induration was found near the calf of the leg: this slowly increased, and the day before his death caused considerable pain. After the mental disturbance had passed off, his head was generally hot, and his face for some time rather flushed; the expression of his countenance generally quite composed; the breathing quick, but easy, with a little stertor during sleep or somnolence; the tongue was moist, with a white fur on its surface; the pulse generally numbered 120; vomiting occurred twice or three times before death. A short time before death small pustules or maturing vesicles were noticed on the body and limbs.

On the examination of the body, a small subcutaneous collection of pus was found near the head of the right fibula. A larger tumour at the upper part of the left calf was not opened. Nothing remarkable was found within the cranium, except that in the cortical substance of the brain, at one particular spot, there seemed to be an evident but very partial softening, by which the separation of the external layer of the cortical substance from the subjacent layer was favoured. The right pleura presented marks of recent inflammation near its lower part, and over the fifth or sixth rib, from its anterior extremity to its angle, was elevated by rounded purulent deposits of various sizes. The corresponding part of the pulmonary pleura presented similar purulent deposits, and the adjoining part of the lung was in a state of recent hepatization. The muscular structures on the exterior of the same rib were found sprinkled with similar, but smaller purulent deposits. The left pleura and lung, and the heart, were healthy. In the abdomen, the only remarkable appearances were numerous scattered depressions in the mucous membrane of the stomach, probably the enlarged orifices of follicles; marks of severe inflammation of the mucous membrane of the large intestine, from the middle of the arch of the colon to the rectum; and the presence of a small quantity of semi-transparent lymph between the convolutions of the intestines, between the middle and lower parts of the abdomen.

Of the second class of cases, seven examples are given. The author, in his remarks, first directs attention to the peculiarities of the former class of cases; the slight primary effects of the local injury, and the anomalous character of the secondary effects; the disturbance of the mental faculties in two of the cases; the constitutional disturbance, exciting the suspicion that the brain, heart, or some important part of the alimentary canal, was in a state of acute inflammation; and in two cases, the severity and rapidity of the symptoms, which were nearly as great as in cases of dissection and other poisoned wounds. He expresses the opinion, that these symptoms were due to a morbid poison being generated in the system—an opinion favoured by the occurrence of vesicles, with puriform contents, on the surface of the body. To explain the formation of this morbid poison, he supposes that the immediate effect of the local injury is so to impair a portion of the animal tissue, as to render it incapable of the proper maintenance of those molecular changes by which interstitial absorption and deposition are carried on; that the changes which take place in dead animal matter proceed in the injured part very slowly, and during health produce no inconvenience; but that if a febrile state of the body be set up by cold or other cause, the morbid influence of the part in which these chemical changes are going on produces inflammation or derangement of a more specific kind in the surrounding tissues, and the further production of a like cause of irritation in the system generally. In one case a remarkable odour of malt or saccharine matter was observed. This the author regards as an almost certain omen of death. In the second group of cases, instead of the vitality of the injured part being reduced, the most striking phenomenon is the production of a new growth, to which vital organization is essential. All living parts, whether old or new, are nourished from living material, and every living cell is produced from a previous cell. In these cases the injury does not destroy life, but only modifies the nutrition of the part, by exerting an influence on small molecules. The result is, that the new cells formed there are modified, from being, as it were, incubated in a peculiar *nidus*. When once the production of morbid corpuscles, suited to the production of a morbid tissue, has taken place, the growth of such structure at the affected part may almost be made the subject of ocular demonstration; but the subsequent appearance of a similar structure in other parts of the body is still involved in some mystery.—*Lancet*, July 17, 1848.

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17. *Case of Hydatids within the Cranium, giving rise to some singular Phenomena.* By James Stewart, M. D. Communicated with some prefatory remarks by Dr. George Gregory. (Proceedings R. Med. and Chirurg. Soc., June 27.)—In the first portion of this paper, Dr. Gregory remarks on the greater rarity of acephalocysts, or hydatids, in the intra-cranial structures, than in the thoracic or abdominal tissues, and refers to Dr. Craigie's observation that in the greater number of recorded cases only solitary serous cysts existed, not clustered hydatids. After noticing briefly three cases, one described by Rentdorff, a second related by Mr. Mowatt, of Worthing, in the second volume of the *Medico-Chirurgical Transactions*, and the third communicated by Mr. Burnell to the late Dr. Baillie, who remarked that none such had ever fallen under his own observation, Dr. Gregory states, as the result of his reading, that the normal series of symptoms flowing from the development of intra-cranial hydatids seem to be the following:—Pain in the head, succeeded, after a considerable time, by epileptic fits, and terminating in apoplexy. The Pathological Museum of the Army Medical Department at Fort Pitt, Chatham, contains two specimens of hydatids of the brain. An account of all that is known

relative to these cases has been furnished to Dr. Gregory by Dr. French. In the first case no cerebral symptoms were noticed during life. After death, cysts, described as hydatids, were found beneath the pia mater, covering the hemispheres, in the right corpus striatum, and in the substance of the cerebrum in its immediate vicinity. In the second case, epileptic fits were present for three years and five months before death. Here there were small round bodies, like hydatids, some hard and almost cartilaginous, not only beneath the pia mater, but also generally throughout the substance of both cerebrum and cerebellum. They were collected to the amount of an ounce or more. Each consisted of a distinct membranous sac, which sometimes appeared double, and in layers like an onion. All the cysts contained a clear fluid, with more or less cheesy-looking matter. Dr. Gregory then communicates the following case, which, at his request, had been transmitted to him by Dr. Stewart:—The patient, a gunner of the Royal Artillery, aged twenty-four years and nine months, was admitted in the Artillery Hospital, Woolwich, on the 29th of April, 1848, immediately on his arrival from Malta, with the following history:—He had arrived in Malta with his company in February, 1847, and from that time suffered from constant headache In November, 1847, he had a severe epileptic fit, followed by coma. Subsequently imbecility showed itself, and his vision became impaired, the pupils being sluggish, and the left eyelid affected with slight ptosis. His memory became defective, and he became subject to immoderate and uncontrollable fits of laughter when spoken to. When he arrived at Woolwich, he still presented the last-mentioned most remarkable symptom. His hearing was a little affected, but both eyes were amaurotic; he staggered in his gait like a drunken man, and the expression of his countenance was idiotic. On the 22d of May, a large piece of meat which he had attempted to swallow stuck fast in the œsophagus, and he was only saved from suffocation by tracheotomy. A few hours afterwards, epileptic fits ensued, and were followed by coma, in which he died on the following morning. On examining the body, there was found in the middle fossa of the base of the cranium, between the cranial bones and the dura mater, a mass, the size of a closed fist, which proved to be a nest of hydatids. The hydatids were very numerous, and varied in size from that of a large pea to the dimensions of a small orange. The contiguous bones were roughened The substance of the brain, which, together with the dura mater, was pressed towards the right side, presented no abdominal appearances. The lateral ventricles were filled with a clear fluid.—*Lond. Med. Gaz.*, July, 1848.

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18. *On the Minute Anatomy of the Emphysematous Lung.* By G. Rainey, Demonstrator of Anat. at St. Thomas's Hospital. (Proceedings of Roy. Med. and Chirurg. Soc., June 27.)—The author first describes the minute anatomy of the pulmonary tissue in the healthy state. He then gives an account of the microscopic examination of portions of lung which were in the state of ordinary vesicular emphysema. The first change which attracted his attention was the perforated or cribriform state of portions of the lining membrane of the air-cells. He next observed that the membrane in the vicinity of these perforations, as well as in many parts which had not yet become cribriform, was studded with minute portions of oil, the membrane itself being thinner at these points. He supposes, therefore, that the conversion of the nutritive material of the pulmonary membrane into oil induces a weakened condition of the membrane, and renders it unable to support the capillary plexuses, and to resist the pressure of the air in the air-cells, and that the perforations already mentioned are the consequence. Other changes follow. The meshes of the capillary network become wider, and the capillaries themselves smaller. Several cells become broken up into one cavity. Fragments of the lacerated cell-walls are then seen containing extremely elongated and contracted capillaries, with very large and generally very long areolar spaces. When the cavity has become very large, the air-cells which were broken up to form it have in a great measure disappeared, and its sides are held together merely by fibrous bands composed of the remains of small bronchial tubes, and of condensed interlobular cellular tissue. When such a cavity is situated near the surface of the lung, the pleura and sub-serous tissue become thickened. The disease is regarded by the author as an instance of "fatty degeneration."—*Lancet*, July 17, 1848.

19. *Aneurism of the Arch of the Aorta.*—Dr. Bellingham, in the numbers of the *Dublin Medical Press* for May and June last, relates several cases of aneurism of the arch of the aorta: with some remarks on the diagnosis of that disease, on the mechanism by which the double sound and double impulse are produced in aneurism of this part of the aorta, and upon the analogy between the normal and abnormal sounds of aneurism of the aorta, and the normal and abnormal sounds of the heart. The following are the conclusions at which he arrives:—

1st. That a double, not a single sound, characterizes aneurism of the arch of the aorta, which closely resembles the double sound of the heart, and may be termed its *normal* sound.

2d. That the normal double sound of aneurism of the arch of the aorta has its cause in the friction between the blood and the lining membrane of the orifice and parietes of the sac, because there is no other agency to which it can be referred.

3d. That the normal second sound of aneurism of the arch of the aorta is caused by the regurgitation of the blood into the sac from the aorta and large vessels which arise from it.

4th. That the first, or the second, or both aneurismal sounds, may be replaced by a murmur, which may have either a blowing, sawing, or filing character; and that such murmurs may be regarded as the *abnormal* sounds of aneurism of the arch of the aorta.

5th. That the first aneurismal sound is much more frequently superseded by a murmur than the second, because the force with which the blood is transmitted to the sac by the left ventricle is much greater than that with which it regurgitates into the sac at the period of the ventricular diastole.

6th. That the abnormal sounds of aneurism of the arch of the aorta, equally as its normal sounds, are caused by friction between the blood and the orifice or parietes of the sac; and that they are nothing more than exaggerated normal sounds —exaggerated, because the degree of friction is then increased.

7th. That in aneurism of the arch of the aorta pointing externally, the sound is not only always double, but a double impulse is frequently also perceptible to the hand.

8th. That the second impulse of aneurism of the arch of the aorta has its cause in the same agency which gives rise to the second sound; consequently neither a double sound nor a double impulse is perceived in aneurism of the abdominal aorta, or of any of its branches.

9th. That the phenomenon known under the name of Frémissement Cataire, or purring tremor, whether it occurs in an aneurism or a large artery, is nothing more than the pulse of aortic regurgitation on a large scale; consequently that it is a sign of regurgitation into the ventricles of the heart, into an aneurismal sac, or into a large or a dilated artery.

10th. That the remarkable resemblance between the normal and abnormal sounds of aneurism of the arch of the aorta, and the normal and abnormal sounds of the heart, renders it probable that the mechanism of their production is the same.

11th. That the abnormal sounds of the heart, having their seat at the orifices of the ventricles, and being the result of increased friction between the blood and the parts through which it passes, are (like those of aneurism of the arch of the aorta) to be regarded as nothing more than exaggerated normal sounds.

12th. That the impulse of the healthy heart, like that of aneurism of the arch of the aorta pointing externally, is *double*, not single; and that in certain abnormal conditions of the heart, this second impulse becomes very distinct, when it has been termed "the back stroke of the heart," or "the diastolic impulse."

13th. That the second impulse of the heart (like that of aneurism of the arch of the aorta) is felt exactly at the period of the second sound; and both sound and impulse appear to be produced by the same agency.

14th. That as sounds almost precisely similar to those of the heart are developed (in an aneurismal sac, which has neither muscular walls nor a valvular apparatus at its orifice, the latter do not appear to be as essential to the production of the normal sounds of the heart as most writers suppose.

15th. That the ordinary theory of the heart's sounds, which refers the normal sounds to one cause, and its abnormal sounds to a totally different cause, fails to explain several phenomena connected with the heart's action and sounds.

16th. That the theory of the mechanism of production of the heart's sounds, laid down in the preceding pages, satisfactorily explains every phenomenon connected with the normal and abnormal sounds of this organ.

20. *On the Action of Diuretics.* By Dr. Golding Bird.—Diuretic agents are divided into two classes by Dr. Bird. The first, termed *specific diuretics*, comprises those remedies which exert no chemical action on organic matter out of the body, and appear to be incapable of augmenting the quantity of solids in the urine, and hence they are only of use in increasing the elimination of water—they may and do act as renal hydragogues, but not as renal depurants. To this class belong squill, copaiba, broom, juniper, turpentine, digitalis, &c. All these have the power of increasing the discharge of fluid by the kidneys; but the quantity of solids present in the urine will never be found to exceed much the normal quantity. Hence, these drugs are only of service in the removal of dropsical accumulations.

The second class (termed *chemical* or *alterative diuretics*) comprehends those medicines which increase the amount of solid elements in the urine, and thus act as true depurants. It includes "the alkalies, their carbonates, and their salts, with such acids as in the animal economy are capable of being converted into carbonic acid, including the acetates, tartrates, citrates of soda and potass. These remedies all act alike; they all actively stimulate the excreting function of the kidneys, and increase the bulk of the urine: but they do more; they actually increase the metamorphoses of tissue by, in all probability, a direct chemical action on the elements of worn-out and exhausted tissues, or other matter in the capillary laboratory of the body. It is well known that alkalies and their carbonates powerfully dissolve albumen out of the body, and even break it up into various secondary bodies: thus, digested with an alkali, albumen yields leucine, protid, and erythro-protid, bodies allied to gelatine, formic acid, and other compounds. In like manner casein is broken up into tyrosin, leucine, valerianic acid, and other elements. From some such changes occurring in the body, and in the living organism itself, we find the chemical diuretics easily effecting important changes." This Dr. Bird has frequently confirmed by direct experiment; and he relates the case of a lady in whom, by the use of three drachms of the acetate of potass, the amount of solid ingredients of the urine passed in the twenty-four hours was increased from 416 to 782 grs., the increase consisting chiefly of creatine, creatinine, uroxanthin, and matter rich in sulphur. The quantity of urine passed daily was at the same time increased from sixteen to forty ounces. "Now, admitting that the elements of our frames resist chemical influences in the ratio of their vitality, it would follow that such constituents of our fibres as present the greatest departure from health are less highly vitalized, and thus yield the easiest to the chemical force exerted by the alkaline diuretics. On this account it is fair to presume that, when we cause an alkaline carbonate to circulate through the blood, it exerts an influence on the nascent elements of those matters less highly influenced by life, allied to that which they exert on dead matter, aids their resolution into substances allied to those produced out of the body, and actually causes the matter to assume so soluble a form as to allow of its ready excretion."

"I would earnestly (Dr. Bird observes) beg a careful and steady trial to the *depurating or chemical diuretics*, especially the salts of potass with vegetable acids, in the treatment of chronic affections, in which the exciting cause, or existing disease, depends upon the presence of some product of less vitality or imperfect organization. I fully believe that in many instances such matters will be often found to yield, whether they present themselves as albuminous deposits in glands, furuncular disease of cellular tissue, or incrustations on the skin, as in some of the squamous and tubercular cutaneous diseases. That they will succeed in increasing the waste of matter, is, from my observation, beyond all doubt; that the lowest vitalized matters will yield to the solvent the readiest is most probable, and that an important and powerful addition to our supply of therapeutic weapons is thus certain."—*Monthly Ret.*, Sept. 1848, from *Lond. Med. Gaz.*, Aug. 11, 1848.

21. *Cod Liver Oil.*—The following account of the chief forms of disease in which

it has been found useful, is taken from an essay on the "History of the Fish-liver Oil," published in the *Gazette Médicale de Paris.*

Chronic rheumatism.—According to Alexander, Knood von Helmendstreit, Amelung, Brefeld, Basse, Fehr, Galcoma, Mall, Moeunig, Munzenthaler, Michaelis, &c., who have all published their own observations concerning the fish-liver oil in chronic rheumatism, this medicine possesses such an efficacy in this disease that it surpasses in their eyes all the other remedies, without excepting the most lauded anti-rheumatics.

This opinion of different physicians, who have all experimented by themselves, cannot be taxed with exaggeration, if it is considered that amongst these cases there are found numerous instances of rheumatic patients being cured, who, after many years of suffering, and usage of all sorts of remedies, having lost their strength and despairing of cure, were completely cured by the aid of the fish-liver oil.

Rheumatic sciatica.—The fish-liver oil did not prove less efficacious in this form of chronic rheumatism, which is generally distinguished by its obstinacy; this is verified by the observations of MM. Knood von Helmendstreit, Rust, Amelung, Munzenthaler, Settenger, and Spitter.

Scrofulous diathesis.—Although there are various observations published in support of the excellence of this oil for certain severe forms of confirmed scrofula, it requires something, candidly speaking, which will prove its efficacy in the scrofulous diathesis with certainty. The cause of this doubt ought not to be looked for in this circumstance, that the liver oil is less applicable in the scrofulous diathesis than in certain of the more severe forms of scrofula, but that the greater part of physicians are in the habit of only publishing their observations of the more severe cases. But if we consider that the scrofulous diathesis is the principle from which emanates, by the accession of aggravating circumstances, all the numerous and often dangerous forms of scrofula, and that the liver oil is in our eyes a true specific for the more severe forms of this affection, it is evident that this medicine is that which ought to counteract this principle with most certainty. Such is the opinion of M. Brefeld and Dr. Galama, who say that the liver oil is the most efficacious remedy for the scrofulous diathesis, and for no matter what form of confirmed scrofula.

Confirmed scrofula.—Amongst the facts relative to the use of the liver oil in some of the manifold forms in which confirmed scrofula is presented, the most remarkable are those which Drs. Brefeld and Roppe have made known, the result of which is that this medicine universally is fit for all forms and kinds of scrofula. The principal forms of scrofula in which it has succeeded are given below.

Swelling of the lymphatic glands.—Under this title we have only to do with the swelling of the superficial lymphatic glands, situated immediately under the skin, in the region of the throat, to the nape of the neck, armpits, or groins.

The fish-liver oil is considered a certain and infallible remedy in swellings of the lymphatic glands which appear oftenest, first under the form of hard unequal tumours, nearly immovable and insensible, but which afterwards, when inflammation has laid hold of the cellular tissue which surrounds them and the skin which covers them, become inflamed, and suppurate in their turn. The cure always requires a much longer time where these swellings are connected with a confirmed scrofulous diathesis. This also can be advantageously influenced by the external use of the oil by frictions on the painful and inflamed tumours; this way of employing the medicine is that which has prevailed and which is recommended by the greater number of practitioners in this form of scrofula. But if the fish-liver oil is efficacious in swelling of the lymphatic glands of a scrofulous origin, it is absolutely useless in swellings of the same glands which are the consequence of small-pox, measles, of scarlatina, or even those which are developed in the course of syphilis, or of a carcinomatous affection.

Scrofulous ulcers.—The effect of this medicine is quicker and more remarkable in scrofulous ulcers, with fungous and irregular borders, generally so difficult to cure, which arise either from suppurative inflammation of lymphatic glandular swellings, or from the dissolution of those indurated strumous tumours which are found so often in subjects of a scrofulous constitution, in all parts of the body indifferently. It has the same effect also in different traumatic lesions which so frequently become the origin of ulcers in subjects of a full scrofulous habit. Dr. Brefeld relies greatly on the external use of this oil, with which he prepares an ointment which he applies to the ulcers by means of a pledget. In one case, notwithstanding, treated by the oil internally, the result was as favourable. The strumous tumours, which we have referred to above, and which ought to be distinguished from lymphatic glandular enlargements, are perfectly cured by the fish-liver oil, even after they have passed into the ulcerous state, provided that the oil be administered in proper time; it was the same in the case of the tumour being on the point of becoming an abscess. The tumours decreased during the internal and external administration of the medicine, and it seems they became dried up.

Chronic exanthemata.—The fish-liver oil has been proved equally efficacious in the chronic exanthemata which are developed under the influence of a scrofulous diathesis, whether they occupy parts of the body covered with hair or places which are destitute of it.

In this case, some say they have obtained the best results from the internal use of the oil, while others pretend, on the contrary, to have obtained as good results by the external use of the same remedy. The usage of it externally, tried for the first time with success by Dr. Guerard for scald head, is principally recommended by Dr. Brefeld, and who pretends, what is more, not to have obtained any good result from the internal use of the liver oil in the exanthematous form of scrofula.

The milky scurf, so often observed in ill-nursed children, in whom there have never before been observed any symptoms of scrofula, and which, according to Dr. Brefeld, forms the transition of true scrofulous exanthemata; the exanthemata which are observed on the long-haired skin of young children, and which often envelop the whole face; scald head, which is not uncommon to see last till the age of puberty; and, finally, the scrofulous exanthemata which come out on every other part of the body, were quickly cured, according to Dr. Brefeld, by the external use of the liver oil, and even after in some cases they had for a long time used the internal treatment in vain. Experience taught him that the use of the liver oil, either externally or internally, had no effect on malignant, hereditary, or contagious scald head, even when combined with oil of turpentine by the advice of Dr. Marteus; the same may be said of some psoriacal and syphilitic exanthemata.

Dr. Hauf reports a case of humid herpes causing an insupportable pruritus, which, after having resisted all sorts of remedies, was cured by the use of friction of fish-liver oil.

Rachitis.—The fish-liver oil is, without exception, the best remedy for rachitis, in all its stages, and under whatever form it presents itself; such is the nearly unanimous opinion of the German and Dutch physicians, who affirm with one accord that it is much superior to any of the so-called anti-rachitic remedies. According to Dr. Schmidt, who has most insisted on the advantages of this medicine in twenty-one rachitic patients which he had treated at the time when he made known his results, thirteen were cured, four were in process of being cured: as to the others, judging from the progress which they had made for the little time they were under treatment, a very favourable prognosis might be drawn.

In France, far from partaking of the enthusiasm of the German physicians for this medicine, they have kept on their guard, perhaps with an exaggerated distrust; its efficacy in rachitis has nevertheless appeared to some placed beyond doubt. We have said that M. Bretonneau, and M. Trousseau, by his example, had obtained good results. It is in these terms that Professor Trousseau expresses himself on this subject: "We have often obtained cures, the rapidity of which surpassed our expectation. Sometimes, after four days of treatment, the sharp pains which the children felt in all their limbs ceased; and the bones which could be bent, acquired, at the end of five days, a considerable solidity."

General conclusions.—Chemical researches have taught us that the fish-liver oil ought to be considered as a very compound medicine. Greasy neutral matter, bilious matter, iodine, phosphorus, each of them well known as possessing great therapeutic efficacy—also a certain number of organic elements, such as butyric acid, gaduine, and some others, the medical action of which is less known—finally, various inorganic salts, as the phosphate and sulphate of lime, chloride of lime, phosphate and sulphate of magnesia, are the substances of which it is composed.

But it may be asked, to which of these components does the oil owe its special virtues? Is it to the iodine, fatty matters, phosphorus, or other principles?

If the diseases, for which the liver oil is administered with success, be duly reflected upon, it cannot escape any one that there are in each of them various indications to fulfil to obtain a cure. For the most part, there is debilitated digestion to be excited, nutrition to be regulated, secretions to be re-established, and the lymphatic system to be stimulated; while, on the other hand, the modifying of the organic nervous system is presented as one of the most important indications to be fulfilled. Neither the bilious matter nor the fatty matter, nor the iodine, nor any other principle, whatever it may be, taken alone, is capable of satisfying at the same time all these indications, and it is not to any of these substances in particular that the fish-liver oil owes its medicinal properties, and the faculty of fulfilling so different and so numerous indications. But it is by the union and co-operation of, if not all, at least the greater number of these substances.

In this state of things, the active principle of the fish-liver oil cannot be discussed in particular, like the active principle of cinchona; but attention ought to be paid, if not to all, at least to the principal elements of the oil, as each of them satisfying special indications which the diseases for which this medicine has been proved efficacious, present.

The medical researches having proved that the black fish-liver oil is more efficacious in rheumatism and scrofula than the other species, and the chemical researches having shown, on the other hand, differences, if not qualitative, at least quantitative, between the three kinds of oil examined, it follows that the principles that are in greater proportions in the black oil than in the other two kinds, ought to be considered as those which best fulfil the principal indications. Therefore it is not the neutral fatty matters, which are found in nearly equal quantities in the three species, nor the iodine, nor the phosphorus, nor the organic salts, which are found in greater quantity in the pale oils than in the black oil, which can be considered as more efficacious than the other principles for the cure of rheumatism and scrofula. It appears, then, that it is to the bilious matter and butyric acid, rather than the other principles, that the greater part of the therapeutic effect can be principally attributed, for they are the substances which are found in the greatest quantity in the variety of oil proved to be the most active.

As to the matter unknown up to this time, and which M. Jough first proved the existence of, in the product of the analysis of the different species of Gadus, and to which he applied the name of Gadine, it does not appear, on account of its insolubility, at least in the condition in which it was examined, to have a right to be considered as an active principle of the fish-liver oil. (*Gazette Médicale*, and *Dublin Med. Press.*)

—Dr. Bennett considers that the therapeutic action of cod-liver oil is due to its fatty composition, and its being perhaps more easily assimilated than other fats. He believes that in rheumatic and tubercular affections, the albuminous compounds are in excess, and the oily compounds deficient; that, therefore, the most rational treatment is to supply the deficient oily matters directly. He explains the failure of other oils to effect benefit, which might be expected, if the fatty matter is the active principle, upon the supposition that other oils, such as olive oil, are purgative. The author proceeds to state that he thinks cod-liver oil is destined, in the hands of the rational practitioner, "to be an important means of curing a class of diseases hitherto considered of the most dangerous and fatal character."

Speaking of the effect of this oil in phthisis, Dr. Bennett's testimony is greatly in its favour; and, in fact, it may now be satisfactorily demonstrated that there is no medicine or system of treatment which holds out so much encouragement in the management of consumptive cases. ("*On Cod Liver Oil,*" *Edinburgh*, 1848; *and Monthly Journal, May*, 1848.)—*Ranking's Report on Pract. Med. in Abstract*, vol. vii.

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22. *On the Internal Use of Turpentine Oil in cases of Hemorrhage.* By L. Percy, M. D. (Proceedings of R. Med. Chirurg. Soc., June 27.)—The author, after noticing the fact that several writers—Adair, Nichol, Johnson, Warneck, Copland, Ashwell,

and Pereira—have spoken of the efficacy of the essential oil of turpentine in hemorrhagic diseases, observes that this remedy seems nevertheless to be little used by practitioners. In the cases in which he first made trial of it, hæmaturia of two years' standing, in an old man of eighty, was stopped in twenty-four hours by eight drops of oil of turpentine, and did not return. He has since used it in different cases of hemorrhage, and always with a favourable result. The cases in which its use is indicated are those of passive hemorrhage. It must not be employed in cases where there is an active determination of blood, and where the pulse is full. When the discharge of blood is the consequence of organic disease, as of disease of the uterus, or of tubercular disease of the lungs, the action of the remedy is not so efficacious; but the author has seen a case of scirrhus of the womb, in which the hemorrhage was for some time stopped by this remedy. The author has found the action of turpentine oil very rapid, an effect being manifest in a few hours, often after one small dose. In order better to ascertain its power, he used it alone, without having recourse to local astringents or cold applications, where he could do so without fear of endangering the life of the patient. He has used it most frequently in cases of menorrhagia and epistaxis; but he mentions, that it appears to him to be particularly applicable in the cases of hemorrhage attending typhus. He noticed the fact that turpentine exerts different actions on the body according as it is taken in large or small doses, being more readily absorbed in the latter case; and he remarks, that as its beneficial action in cases of hemorrhage must depend on its being absorbed, the inference would be drawn, that the doses in which it is given in such cases ought to be small. His experience confirms this conclusion. He has always found a dose of from eight to thirty drops sufficient. The best vehicle for it is almond emulsion, with a little gum Arabic. When there is pain in the abdomen, a few drops of laudanum may be added.—*Ibid.*

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23. *Carbonate of Ammonia in Scarlet Fever.*—The use of carbonate of ammonia in scarlatina was first advocated by M. Strahl, in Germany, and afterwards resorted to in France; in which latter country it is still highly esteemed and used by M. Baudelocque in the Hôpital des Enfants. This physician has not only used it in mild cases, but also in the malignant form of the disease, and where the eruption has receded, and in the consecutive dropsy of scarlatina. He sums up by stating that he has derived great advantage from its use in irregular scarlatina with cerebral disorder and depressed powers; in scarlatina attended with the production of false membranes on different mucous surfaces; in hemorrhagic scarlatina; and in the dropsy of scarlatina, whether confined to the cellular tissue or extended to the serous sacs. He has administered it in the form of mixture, simple or aromatized, and in gradually augmented doses.

There can be but little doubt of the efficacy of ammonia in the eruptive and also in typhoid fevers, acting as it does as a general stimulus to the system, and as a special one to the cutaneous and mucous surfaces; and indeed, it has been considerably employed in this country in scarlatina, but not so much in the character of a specific as it appears to be viewed by M. Baudelocque, as on account of its general and special action above indicated—an action particularly required where a debilitating poison, like scarlatina, is preying upon the system. The value of ammonia in the dropsy following scarlatina has been less appreciated, but it is certainly deserving of trial; for, *à priori*, we may anticipate benefit from this medicine by reason of its stimulant action upon the capillary system at large, whereby it influences nutrition at large, and particularly that of the mucous membranes. Thus it may restore the capillary system of the kidneys to its normal condition, removing the congestion present, and unloading the uriniferous tubes of their impacted epithelial particles, and so rendering the renal secretion natural and more active, relieve the systemic dropsy.—*Lancet*, Aug. 26, 1848.

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24. *On the Utility of Trisnitrate of Bismuth in the Diarrhœa accompanying Phthisis.* By Theophilus Thompson, M. D. (Proceedings of R. Med. and Chirurg. Soc., June 27.)—The author considers the trisnitrate of bismuth to surpass in efficacy and safety our most approved remedies for this complaint. He has taken every opportunity, during the last twelve months, of testing its powers, and has

preserved notes of twenty-one of the cases in which it was administered. Of these, eighteen were phthisis in various stages of progress, and three, bronchitis. In fifteen of the patients the diarrhœa was entirely removed; in four, transient benefit was experienced; and the remedy proved useless only in two instances. The dose administered was about five grains three or four times daily, usually combined with a little magnesia and gum Arabic. Dr. Thompson has referred to various authors who have written respecting the properties of bismuth, but has not been able to collect from them any evidence of its powers in the phthisical variety of diarrhœa, but he entertains a strong conviction of its peculiar appropriateness to this affection, and has obtained important conformation of his experience in a recent communication from Dr. Lombard, of Geneva.—*Lond. Med. Gaz.*, July 14, 1848.

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25. *Case of Epilepsy cured by Sulphate of Zinc.*—Mr. WATSON, of Dumfriesshire, narrates (*Lancet*, July 22, 1848), the following case:—

"J. H——, aged thirty-one, and unmarried, has been subject to epilepsy since she attained the age of fourteen years. She first menstruated about that time, and the epileptic fits returned regularly every six weeks afterwards, except once, when, owing perhaps to her having received a severe burn on the chest and neck from falling on the fire during one of the attacks, the succeeding interval was three months. She is tall, and generally healthy; menstruates every four weeks; her appetite is good; her bowels regular; she has no aura, nor is she apprised of the approach of the fits in any way whatever. She is generally engaged in household matters, and occasionally employed out of doors. Previous to 1846, several medicines had been tried for the purpose of removing or alleviating the complaint, and about the commencement of that year sulphate of zinc was administered. At first, the dose was two grains daily in solution, and for a few weeks it appeared to have little effect, but in process of time the intervals became longer, and on the 16th of December, 1846, when she had a return of the paroxysm, the interval had extended to sixteen weeks. I then increased the dose to three grains daily, and she remained perfectly well until the middle of May, 1847, when she had another attack. At the end of June she had a second, and about the middle of September a third, in consequence of which I augmented the quantity to four grains daily; since that time she has had no return of the complaint. In this instance, at least, the use of zinc has been attended with the most beneficial effects, it having not merely lessened the excitability of the system, and broken the habit of periodicity, but actually rendered the patient entirely free from the malady for nearly forty weeks. Nor can the improvement experienced be attributed to any other cause, such as free exposure to the open air, exercise, ablution, regimen, &c., as no greater attention was paid to these things during the use of the medicine than had been done previously.

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26. *Hypertrophy of the Follicles of the Pharynx.*—M. CHOMEL has carefully investigated this pathological condition of the pharynx, and has given it the name of *follicular angina of the pharynx.* This affection consists in an abnormal development or hypertrophy of the follicles of the pharynx, of the pillars of the fauces, and of the uvula. It may exist at any age, but is more frequent between 15 and 30. It is much more frequent in men than in women, in the proportion of 17 to 5. Accompanying this lesion, M. Chomel noticed a peculiar structural condition of the mouth and nose,—the nasal fossæ being constricted, as also the anterior and posterior nares, and the upper lip short, exposing the teeth; a condition necessarily associated with breathing through the mouth open, and which may be a cause of the enlarged follicles, by its rendering secretion more active in them. This affection often coincides with anterior herpetic eruptions, and many patients are troubled with acne. Singers are subject to it, together with a thickening and redness of the mucous membrane.

In most cases, the disease advances slowly; when arrived at a certain stage it causes great inconvenience. It frequently commences with a slight cough, without expectoration, and is generally unattended to. When the secretion becomes abundant, then it becomes troublesome. The affection is marked by a feeling of constriction in the fauces; the patient exerts himself to expel masses of mucus, which are found over the entrance of the air-passages; he desires to drink a little water to allay the uneasiness or pain, which it will effect for a few moments. In slight cases, on depressing the tongue with a spoon, from two to ten little red points, of the size of a millet-seed and round, may be seen disseminated over the reddened mucous membrane. In a more advanced stage, these round points become discoid, or ovoid, and glistening; and in the most intense degree, we see the diseased parts projecting in the form of pillars, or projecting columns, from the sides; and lastly, these transverse folds may so entirely occupy the pharyngeal mucous membrane as to leave but a few small isolated patches of it in a normal state. The alteration of the follicles, however, is not always in relation with the intensity of the symptoms; for the latter depends much on the susceptibility or irritability of the patient.

It is not uncommon to see the follicles covered over by a thick, adhesive mucus, which must be removed before their condition is brought into view. The progress of this affection is essentially chronic; it will often spontaneously disappear; at other times will yield to very simple treatment; but sometimes also is very refractory, resisting all modes of cure. Speaking and singing aggravate the malady.

The cough attending it is guttural; it does not come from the chest, nor do the pellets of mucus, which are expelled in small quantities. The latter are small globular masses, of the size of a small pea, very adhesive, and semi-transparent; in the morning they are sometimes strewed with minute grayish-black points, consisting of inhaled carbon. The voice is generally somewhat altered; and as a similar change occurs in phthisis, some alarm may be created; but then the absence of the peculiar features of the latter disease will remove all disquietude on that score. The voice becomes soon worn out, and reading or speaking aloud soon involves the necessity of ceasing. Sometimes, owing to a piece of tenacious mucus, the patient is obliged to wait before he can articulate the smallest word. Singers perceive they have lost one or two notes, that the clearness of their voice is lost, as also its sweetness of tone.

The diagnosis presents no difficulty, unless the susceptibility of the patient be so great as to preclude examination, or render it very difficult, when care must be taken not to confound this condition of the follicles with the common normal hypertrophy of the mucous membrane and follicles, which is often present in advocates and singers, and which demands no treatment.

Cauterization is the most effectual and ready mode of treatment, but it is sometimes difficult to limit. Nitrate of silver, or dilute nitric acid on a sponge, may be used for the purpose. Caustics, however, should not be used in the first instance; gargles of borax and alum should be previously tried, and will in most cases relieve, if not permanently cure. The sulphurous waters of the Pyrenees and of Enghien, particularly the latter, have often proved useful—one or two glasses being used in a morning, gargling and then gradually swallowing. In summer, douches to the neck may be used as adjuncts. Reading aloud must be avoided, as also much talking, and the diet must be regulated. Acrid and irritating aliments must be refused, and care should be taken to masticate thoroughly parts of hard substances, as crust, which may mechanically irritate the pharynx.—*Lancet*, Sept. 2d, 1848.

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27. *Pharyngeal Pouches.* By Mr. Dendy.—Mr. G. S., after some affection of the tonsils and uvula, eight years ago, placed a pepper corn in his mouth, which suddenly slipped backwards and lodged in his throat. It remained there about a week, causing great irritation, but was eventually dislodged. He has ever since been aware of the temporary lodgment of foreign bodies in the same situation, but has not felt anxiety upon the subject. Gradually these lodgments seemed to increase, and large bodies became arrested in their course, the secretion of saliva becoming profuse. About two years since the uvula was excised, by which the complaint was much aggravated.

At the present time the patient is compelled to fill the pharyngeal pouch with soft solids, to the extent of two ounces, before he can get any food to pass into the stomach. He can at any time eject the contents of the bag.

In a second case, in the person of a bishop, now deceased, the affection came on imperceptibly, and could not be traced to any particular cause. The contents were often spasmodically expelled, and the breathing was occasionally interfered with.

Mr. Dendy, the narrator of these cases, appends the following remarks:—

As to the anatomy of these curious cases:—The pouch, I believe, usually dips down between the œsophagus and the vertebræ, occupying, in fact, the place of the œsophagus, which is pressed against the trachea, and suffers attenuation of its coats from this compression. It is also strained or puckered by various degrees of traction, constantly increased, of course, by gravitation and the weight of the ingesta. This at length forms a valvular communication between the pouch and the œsophageal canal immediately below the cricoid cartilage in front, and opposite the fifth or sixth cervical vertebra behind, thus not only impeding or entirely obstructing deglutition, but even preventing the introduction of a bougie or hollow tube, through which aliment might be admitted into the stomach, unless the relative position of the cavities be distinctly understood.

Now, what are the especial tissues which constitute the pouch?

May we not place the cases to which I have referred in the same category with those diverticula or pouchings, not only of the intestines, but of those other tubes which are frequently submitted to the influence of contraction and dilatation.

The lodgment of foreign or indigestible bodies will sometimes pouch the stomach itself. Amongst other persons, Dr. Baillie saw a capacious pouch thus and therein formed, which contained five halfpennies.

The cells of the colon are often immensely distended by scybalæ, especially in young women, although apparent regularity of defecation may have averted the slightest suspicion of such a state.

Although the etiology may differ, we may adduce, as analogies, those dilatations found above the contractions of tubes, whether by spasm or thickening of coats. We may refer to the bulging abscess and infiltration behind urethral strictures; to the bagging of the bowel, when its calibre is diminished or contracted; and I may express my belief, that many cases which have been considered to be merely stricture, are indeed closely allied to those with the recital of which I commenced my observations.

And does the bag consist, or not, of the entire pharyngeal tissues?

I believe that it may consist of thickened mucous membrane only, and that continued and progressive pressure (as in the lodgment of a body in the sacculus formed by the rather sudden contraction of the pharynx, into the œsophageal tube, increased by the effort of severe coughing, especially when combined with pulmonary disorder, as in the case of my present patient and the bishop), may have actually split or separated the muscular fibres of the canal, thus constituting a hernia of the mucous membrane analogous to the formation of true aneurism from muscular effort, or, perhaps, more nearly allied to those cases of double bladder, one of which is recorded in the last volume of the *Transactions* of the Medical Society. The coats of gastric pouches are usually much attenuated, and that not from inflammation or ulceration, but from mere mechanical pressure.

Now, on the assumption that many of these interesting cases may have been mistaken for œsophageal stricture—a simple contraction of canal—we may confidently point to one probable cause of difficulty or failure of the introduction of the bougie, in consequence of the *valvular orifice* (for such, indeed, it may be termed), of the œsophagus, and the constant slipping of the bougie into an artificial cul-de-sac. A point in practice may hence be adduced. In cases of difficulty, it would be well to place the patient nearly on his back, so that the pouch may rest on the spine, and then to press the bougie forwards on the trachea, at the same time uplifting the trachea itself. If the existence of a pouch be determined, the same plan should be adopted, and this immediately after the emptying of the pouch.

Regarding the permanent relief or obliteration of these bags, I cannot yet speak practically. I contemplate, however, the employment of a canula and sponge, slightly wet with a very strong solution of nitrate of silver, if the symptoms of my present case should, by their aggravation, warrant this proceeding. At the same time, I should impart nutrition as much as possible, or altogether, through the elastic tube introduced into the stomach, so as to close the mouth of the pouch, and put it, as it were, out of office.

I believe that relief might be insured on one or other of these principles—either the shrinking or contraction of the bag, by its being kept empty and compressed, or by the adhesion of its sides, so as to produce complete obliteration; for although the mucous membrane is not so prone to adhesion as the serous tissue, we have very sufficient analogies to warrant that it might ensue in such a case.—*Prov. Med. and Surgical Journal*, Aug. 9, 1848.

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28. *Practical Remarks on Croup.* By Dr. H. Zeroni.—The most ordinary form of croup is *Congestive Croup.* This form generally occurs at a time when there is a tendency in the weather to induce catarrhal affections, manifesting itself suddenly, generally in the night, and without any precursory symptoms: with the exception, perhaps, occasionally of a slight cold in the head. In this form of the disease, children wake from a quiet sleep with a sharply barking kind of interrupted cough, raise themselves in bed, and begin to cry in apparent distress, a piping hissing inspiration being occasionally heard, as well as in their coughing. The countenance is often flushed and turgescent, but the respiration is not hurried, and but little febrile excitement is perceived in the pulse. When the attack subsides, the child again falls asleep, and rests quietly till the morning; occasionally, however, the attack recurs, respiration becomes more noisy, rattling and hissing, and the child either vomits, or simply makes an effort to do so. This form of the disease requires little more than careful nursing for its cure; the child should be kept in bed, be made to drink copiously of warm drinks, partake freely of some oily emulsion, and have a sponge steeped in hot water laid on the neck. If, however, a hissing hurried respiration causes apprehension of a recurrence of the attack, the most effectual means is to give an emetic, continuing its use until the child has vomited several times. (This form of the disease appears to be induced by an hereditary and acquired predisposition.) To young children during the first year, Dr. Zeroni gives ¼ gr. cupr. sulph. every quarter of an hour.

The second form is *Inflammatory Laryngeal Croup.* This is far more serious in its nature, and *never* occurs without premonitory symptoms, or where it may not be referred to the action of some injurious influences. It may have been induced by the pre-occurrence of the milder form, or owing to exposure to bad weather immediately after recovery from a former attack. The characteristic symptoms of this second form of croup are as follows: Broken, rough, whistling cough; the inspiration is quick, and has a sharp sound; the child is restless, moves the hands, bringing them frequently to the head and neck. The face is hot, red, or purple, the neck swollen, whilst the pulsations of the heart and arteries are rapid. When the attack subsides, the child becomes strikingly animated, enters into his customary sports, and evinces no desire to lie down or to go to sleep. Respiration after the first attack, and even after several attacks, is quiet and natural; it becomes, however, gradually more hurried and noisy, and a faint rattling is heard, which assumes by degrees a metallic sound. Hoarseness increases, and the voice becomes low and whistling. The attacks come on more frequently, and the child is more restless and irritable during the periods of intermission, whilst the pulse grows fainter and fainter. This uneasiness, however, ceases. The child dozes continually, lies on its back, with its head thrown back and pressed into the pillow; the throat protrudes, the countenance is drawn, pale, and swollen, somewhat of a bluish or yellowish tinge. The eyes are sunk, and half shut; whatever is handed to the child is impatiently pushed aside, and nothing can induce it to drink. The respiration is loud and rattling, all the muscles of the neck act convulsively, the pulse is frequent and small. The child dies either in this state of sopor, with the symptoms of paralysis, or in the midst of convulsions induced by another choking attack of cough.

This form of disease requires prompt and energetic treatment. No time should be lost in abstracting blood, and no apparent amelioration of the symptoms should hinder the frequent application of leeches, in proportion to the age, until the child begins to evince an appearance of exhaustion from loss of blood. A second important means is cupr. sulph.; from 3 to 4 grains of which should at first be given in order to induce vomiting, and the dose should be then reduced to ⅛ or ¼ of a grain, every half hour, or hour, until the disease assumes a favourable turn. Dr

Zeroni also speaks of the invaluable aid he has derived in some cases of *this* form of croup, but not in any other, from a combination of musk and opium.

We now proceed to notice the third form of croup.

Inflammatory Tracheal Croup.—This is likewise attended by premonitory symptoms, and induced by pre-existing or extremely injurious influences. It generally occurs in the months of February and March. Children catch cold, have a dry, somewhat rough, cough, which being often disregarded, they are frequently suffered to expose themselves to cold and damp; the hoarseness and cough gradually increase, but this state often continues for upwards of a week before the occurrence of the fit of choking, and before medical advice is sought. After the first attack, the child is often cheerful and even at times extremely merry. The voice is quite gone, the respiration somewhat hurried, and more or less rattling; the cough not frequent, short, rough, unattended by a whistling inspiration, no expectoration, or if any, merely a white frothy mucus interspersed with a few streaks of blood; the pulse quick, the skin warm, and the urine natural. If the little patients are able to speak, they complain of pain in the neck and the middle of the chest. By degrees the choking fits become more frequent, the respiration more hurried and difficult, and the tone accompanying it rougher and more croaking. Extreme hilarity and the most remarkable movements alternate with excessive lassitude, during which the child sinks down exhausted, falls asleep, exhibiting the most marked disinclination to be spoken to or touched. The cough becomes a noiseless suppressed expulsion of air, the attacks are accompanied by a violent noisy rattling sound, the muscles of the neck become powerfully convulsed, and the head is thrown far back. The pulse is small and quick, the skin drawn, the muscles extremely relapsed, the face swelled and puffy, the lips blue. The child dies in a state of sopor, as if from asphyxia. This form is more fatal to children under two years of age, than to those who are older. It is met with in children of six, or even occasionally, nine years of age.

The application of leeches is of the greatest importance, since on this depends the result of the whole treatment. If a sufficient number of leeches be early applied to the neck and chest, we may regard the termination of the disease as probably favourable. Emetics do not appear to have much influence here, although they occasionally relieve the respiration.

The fourth form, which is designated by Dr. Zeroni as *Aphthous Croup*, is the most dangerous, but fortunately also the most uncommon; it has only been observed in autumn, during a continuance of stormy, cold, and rainy weather. It never occurs unattended by premonitory symptoms. The child is somewhat excited, occasionally flushed, and appearing from time to time to have transient febrile symptoms. As, however, it is cheerful, sleeps well, and has a good appetite, these symptoms are too often neglected, and the child is suffered to go out in the damp or cold, until at last it complains of pain on swallowing. On examining the throat, the tonsils are found to be somewhat swollen, reddish, and covered here and there by a yellowish-white puriform investment. The submaxillary glands are swollen. The child continues, however, cheerful, and there is scarcely a trace of fever. The aphthous streaks or points now extend gradually more and more, approaching each other. On removing part of this investment from the tonsils, we find that the subjacent membrane is of a brownish-red colour, but not dry. Deglutition becomes more painful, but still there is no fever, and it is not till the fourth or fifth day that the symptoms assume a more serious character. Hoarseness comes on, a low singular kind of cough is heard, and occasional oppressive sensations are experienced. The disease soon runs its fatal course, and the child, after several days of indescribable suffering, dies in a state of sopor, under circumstances similar to those of which we have already spoken. A prophylactic mode of treatment seems the only one that is of avail in this form of croup; and, considering the nature of the disease, too much stress cannot be laid on those means of prevention under the control of parents—such as prompt attention to any symptoms of indisposition manifested by young children, and care not to expose them to the open air until all morbid symptoms are entirely removed; since Dr. Zeroni mentions that where once this aphthous affection of the tonsils was established, he never yet succeeded in saving the child; leeches, tartar-emetic, and calomel being all without avail. The only means which he considers at all likely to produce a favourable result, are the external application of caustics, as suggested by Aretæus. Dr. Zeroni considers that this aphthous affection of the tonsils may occur in adults, although in their case he has never observed a fatal result. The disease may manifest itself alone, or conjointly with febrile diseases; but he has not found that in this latter case the local affection rendered any change necessary in the mode of treatment for the main disease.

The fifth form of croup, observed by Dr. Zeroni, is *Suppurative Croup.* This is invariably found to have been preceded by a fully developed catarrh, and usually occurs at the close of winter, and the beginning of spring. It begins with more or less fever, restlessness, insomnia; the cough that was previously loose, becomes dry, rough, and barking, without being attended with a whistling inspiration, or a metallic sound. The cough comes on by fits, during which the child tries to sit up, bends the head forward, and puts its hands to its ears, tongue or mouth. The attacks are not attended by choking, but cause distress by the continuance of the short broken cough. The child is hoarse from the beginning of the disease, but loses his voice entirely after a time; cases, however, occur, in which the cough is at first loose, and the voice clear, but where there is much fever at the beginning of the disease, and even strongly marked delirium occurring at night. Fever gradually increases, the child sleeps almost continually, actual suffocative fits at length come on, the respiration becomes hurried, gasping, and rattling. The child is pale and appears swollen; and finally torpor supervenes, with an extremely quick pulse and profuse perspiration, and the child not unfrequently dies in convulsions.

If the disease is neglected, it generally proves fatal to infants and very young children from the ninth to the eleventh day. In adults, it may be prolonged to the fourteenth or eighteenth day; in the latter case the attacks are much more violent. The suffocative attacks which generally supervene on the seventh day are most distressing; the child starts up with violence, tears, scratches, and bites everything it can lay hold of, often tearing its hair and biting its hands; it appears to be in most fearful struggle, and in the height of its agony, the hoarseness suddenly disappears, and it cries in a loud voice for help; the short cough becomes looser, and mucus is expectorated, the fever abates, and finally the dreadful sufferings of the little patient terminate in symptoms of paralysis.

This form, like the others, demands a prompt and early application of leeches, which must be repeated with a frequency proportionate to the age of the child and the violence of the fever; it is almost the only thing to which recourse can be had, but as soon as the cough becomes somewhat less distressing, and the fever abates, a favourable termination of the disease may be hoped for; occasionally, however, much service is derived from cupr. sulph., given in sufficient doses to produce vomiting; this must be done when the cough and fever have abated, and the suffocative attacks have begun. The above forms of croup are only met with in children, and seldom after their sixth year. Dr. Zeroni scarcely attaches any faith to the opinion entertained by many, of the fatal nature of croup in adults. He says that he certainly has observed all the symptoms of croup most strikingly manifested in women, but these were found to depend on uterine derangement, and yielded to a mode of treatment adopted with reference to diseases of the latter kind; and he considers that where adults have sunk under croupous symptoms, they must be ascribed rather to œdema glottidis than to genuine croup.—*Brit. and For. Med. Chir. Rev.*, July 1848, from *Henle u. Pfeuffer's Zeitschrift für. rat. Med.*, 1847.

29. *On Diabetes.* By R. B. Todd, M. D.—The *Prov. Med. and Surg. Journal* (June 28) contains an interesting lecture on diabetes by Dr. Todd, with the particulars of two cases of the disease treated in King's College Hospital. The following are the inferences which Dr. Todd draws from these two cases:—

1. The first of these is, that the azotized dietetic plan of treatment is efficacious; that the patients were more benefited by it than by any other means; and that the admixture of a small quantity of vegetable food did not very materially interfere with its favourable operation.

2. The evidence furnished by these cases is opposed to Bouchardat's theory, that the sugar is wholly derived from amylaceous food, and is little, if anything, short of a refutation of it. Take, for instance, Hardy's case: when he was put into the solitary ward, he was deprived of all amylaceous food, and yet he still

continued passing from two to three ounces of sugar daily. But it may be said that this was furnished by the greens, which he then took—this, however, could not be the case, for they would hardly weigh as much as the sugar that was evacuated; but there was one period in which he did not even take greens; he took no vegetable food whatever, but lived entirely on meat, and that deprived of fat as much as possible. This period was from the 15th to the 24th of December; notwithstanding, however, this total exclusion of all vegetable matters from his diet for nine days, he evacuated in that time from twenty-five to thirty ounces of sugar, and his own bodily weight was all the while increasing. Whence, I would ask, could all this sugar have been obtained? The same circumstances occurred in Bowles's case though not, perhaps, to so striking a degree.

3. The great increase of the power of the stomach is truly remarkable; these men found no difficulty in digesting four pounds of meat, besides several eggs, in one day, a task twice as great as any ordinary stomach could perform. The highly developed condition of the mucous membrane of the stomach was, no doubt, associated with this exalted power of digestion, and probably exists in all these cases.

4. The fact that sugar could not be detected in the substance of the kidney, goes to show that it is not there secreted, that it does not enter into any organic connection with the elements of the kidney, but merely percolates in solution through it; hence the disease of the kidney must be secondary. The sugar doubtless reaches the kidney in solution in the blood, and there acts upon that organ as a diuretic, passing possibly dissolved in the water that filters through the Malpighian bodies, and not being attracted from the blood through the walls of the tubes.

5. The comparative conditions of the epithelium of the liver and kidneys are very singular, and I am not aware that a similar observation has been previously made; it would tend to show with what avidity all carbonaceous matters, fat as well as sugar, are directed to the kidney, in this disease. Most probably, to some extent, the fat of the liver goes, in common with fat from other parts of the body, to the formation of sugar; but this does not account for the deposition of fat in the epithelium of the kidneys.

Lastly, these cases justify the conclusion that this disease is essentially one of the primary organs of digestion, whereby all substances readily convertible into sugar are quickly so converted; and that sugar is not digested, but passes into the blood unchanged, whence it is rapidly eliminated by the kidneys. We must not forget that this was, in fact, the view taken of this disease by Dr. Rollo, an English physician, who was the first to suggest the plan of treatment, which all experience proves to be the most beneficial.

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30. *Statistical Researches on Chorea.*—Dr. Easelmann, after collecting reports of cases from different authors, and adding to them his own, finds that females are much more prone to chorea than males, in the proportion of 73 to 27 in 100 cases. Up to the age of 11, of 33 patients, 22 were girls, 11 boys; from 11 to 15 years of age, of 45 cases, 34 were in females, and but 11 in males; above 15 years old, of 22 patients, 17 were women, and only five men.

Thus, whilst the proportion of males remains the same before and after the age of 10, the proportion of females increases remarkably from the 10th to the 16th years—a fact which leads to the conviction that the period of puberty exercises a great influence on the development of the disease.

Respecting the causes of chorea, fright is the most common. Thus, in the 100 cases, 31 were referable to this cause. Next in the category, rheumatism appears to be a not uncommon cause, eight cases in 100 being traced to it. In 42 instances, the exciting cause could not be arrived at.

The interval elapsing between the operation of the exciting cause and the onset of the morbid phenomena, was not noted in 74 cases. In eight, the chorea manifested itself immediately, in 13, after a week, and in five, after two weeks or more.

Of the success of remedies used, purgatives alone, or combined with diet, were successful in six cases, and of benefit in another; two cures are referred to rhubarb administered in port wine; arsenic was employed in seven cases, in two with success; iron in 29, effecting a cure in 19, and benefiting in two cases; zinc, in the form of the sulphate chiefly, effected a cure in 45, and improved the state in two others. Quinine, gentian, chamomile, and nux vomica were tried in nine instances, and cured in three. Antiphlogistics were used with three patients, curing two, and relieving a third. Electricity has proved of great service in old and rebellious cases, chiefly in young women in whom the chorea had an hysterical character; and in children, where the disease was not dependent on irritation; nine cases of cure out of 15 are attributed to this agent, but in five of those nine cases oxide of zinc and carbonate of iron were conjoined in the treatment. Affusion has also succeeded, but not to such an extent as electricity.

In fine, of the 100 cases, 80 were cured, seven nearly cured, ten relieved more or less, and three died. The duration of treatment was for three weeks in 24 cases, from three to six weeks in 40, from six to eight weeks in 23 cases, and from two to three months in 13 other instances.—*Lancet*, July 15, 1848.

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31. *Epidemics of Fever.*—The past year has been signalized by the almost universal occurrence of outbreaks of fever, varying in intensity, but, for the most part, exhibiting a malignity which has been followed by unprecedented fatality. Independently of the interest which attaches to these fearful visitations as matter of scientific reflection, the recent epidemic may claim a deeper hold upon our minds, of another character, arising from the awful ravages committed among our own ranks, and the consequent sacrifice of every worldly comfort to hundreds of those helpless ones in whom we ought all to take a personal interest.

Histories have been furnished of several of these epidemics, or, rather, of the same epidemic as it appeared in different localities, of the principal of which we purpose to give a brief analysis.

Dr. Paxton, (*Prov. Med. and Surg. Journal*, Nov. 3, 1847,) of Rugby, describes fever as it appeared in a mild form in that neighbourhood. It is stated by him to have been generally preceded by diarrhœa, and to have rarely been fully developed when that symptom was judiciously treated. The febrile symptoms are said to have declared themselves under three degrees, and were recognized as follows:

The countenance expressed stupefaction; chills followed by heat occurred every half hour, with headache, quick pulse, furred tongue, epigastric pâin, loaded urine, &c. These were the symptoms of the milder form, and soon subsided. If, however, the noxious influence had been more decided in its effects, the second degree of fever was observed. This differed from the first chiefly by its greater intensity. The patient, at the early stage, had a deep flush on the cheek, alternating with paleness; dry skin; thirst; thick, drab-coloured secretion covered two-thirds of the tongue; the pulse rapid, i. e. from 110 to 130; urine turbid. Uniformly there was a certain amount of cerebral disturbance, indicated by moaning or crying out, with sudden sharp pains. A restlessness and delirium existed in most cases, and led one to suspect meningitis. After the subsidence of the latter symptoms, marked pervigilium was observed, which was followed by unusual torpor.

The third degree exhibited the common characteristics of typhus.

In referring to the treatment of this epidemic, Dr. Paxton takes occasion to criticise the opinion that wine and a cordial plan of treatment are necessary in fever, and illustrates his position by the detail of cases in which mischief was supposed to have arisen from this practice. He proceeds to state, that the successful treatment of this epidemic depended on the strictest attention to regimen; errors in diet were fatal. All kinds of stimuli had the effect of increasing arterial action, congestions, and cerebral disturbance. It was only in the stage of *perfect subsidence* of the malady, that wine could be taken with impunity. He remarks that he had often to regret the permission he had given to use wine at too early a period. The most mild species of nutriment were the best for the patient. Time after time has he known a generous diet, such as beef-tea and wine, to derange the viscera, and to have a direct tendency to excite organs already too much excited by febrile phenomena, and the consequences were invariably a correspondent depression of the vital powers. The principle which suggests wine, and the highest nutriment in low fever, in theory is, he says, plausible enough. "To oppose what was esteemed strength to weakness, is a theory which readily gains an ascendency in the minds of those who are ignorant of the management of diseases. They are haunted by the single perception of *debility;* but the exhibition of wine, to counteract the debility, only involved the patient in additional dangers. At the advanced stage of fever, wine is the medicinal extreme unction for the patient's dismissal. In the earlier stages, it may be symbolized by the golden cup filled with abominations." There could be no compromise, he observes, between wine and the Rugby fever. It was not long before he found, that either the nature of the fever, or the peculiar habit of persons in this locality, would not allow of the administration of stimulants without decreasing the chances of recovery.

These remarks respecting the use of wine in fever, are certainly not in accordance with the opinions of the best authorities, and differ widely from the views expressed in the following communication by Mr. Bree, of Stowmarket.

Mr. Bree gives the history of an epidemic fever as it was witnessed in the parish of Finbourgh, in Suffolk, the account of which embraces points of great interest, more especially as respects the disputed point of contagion, the operation of which on the cases in question he establishes beyond the possibility of doubt. In the treatment of the disease he exhibits a full acquaintance with what we believe to be the most satisfactory therapeutics of fever at present known. The indications he kept in view were:

1st. To obviate *the effects* of local congestion, and of what he believes to be in fever *altered* blood; *which effects*, again, he believes we see in or *about* the capillary system, or in ulceration of Peyer's glands, &c.; and,

2d. To prevent his patients from dying by asthenia; to keep them, in fact, alive.

The first indication he attempted to fulfil by the use of the pulvis sodæ comp. of Guy's Hospital, a most useful medicine in these cases. It is composed of carbonate of soda, compound chalk powder, and calomel; sixteen grains contain one grain of calomel. Of this he gave from five to twelve grains every four hours, with or without a solution of the carbonates of soda and ammonia.

The second indication he endeavoured to fulfil by the administration of port wine, with or without brandy, in large quantities.

In the cases he has detailed there were frequently abdominal and thoracic complications; in one case there was decided pneumonia, but he did not on this account omit the wine, though he pushed on the mercury. He was equally regardless of delirium, which is, probably, always an effect of innervation in these cases; and of the dry tongue. Whenever he found unequivocal indications of debility, as evidenced by a quick, thready, irritable pulse; *trembling;* sordes about the mouth and teeth, &c., he invariably gave wine. The result of the cases related fully bears out the propriety of the practice.—(*Prov. Medical and Surg. Journal*, April 15, 1848.)

The fever which has recently prevailed in and about Kilkenny has been described by Dr. Lalor (*Dublin Quarterly Journal*, Feb. 1848), under the name of "gastro-enteric fever," derived from the prominence of gastric and intestinal symptoms. The invasion of this form of fever was sudden, setting in, in general, with rigors, followed by delirium or dullness of intellect, vomiting, diarrhœa, pains in the joints, &c. After the continuance of these symptoms for six or eight days, the fever usually subsided. The relapses, which were frequent and often fatal, assumed one of four forms:

1. Pyrexia attended with severe pains, similar to rheumatism, often terminating favourably in from three to seven days. 2. Pyrexia, with distressing nausea, and vomiting of a grass-green fluid; prostration; cold, clammy skin, &c. 3. A combination of the two preceding forms. 4. A species of protracted fever with nausea, irregular bowels, and variable pulse; termination usually favourable.

In 1845, a purpuric eruption began to be a concomitant of the fever. In the spring of 1846, this combination became more general, the fever at the same time putting on a more typhoid type with diarrhœa, general œdema, and gangrene. The eruption generally appeared first on the upper part of the chest, subsequently on the abdomen and extremities, seldom on the face. In bad cases there were large distinct bullæ filled with a bloody serum. The gangrene usually appeared in the mouth, the pudenda, or anus; bad sores and gangrene of the extremities were rare.

The treatment followed by Dr. Lalor in this fever was, in the first instance, expectant. In collapse, external warmth and stimulants were employed. Blisters were found useful for the præcordial pains, but leeches and depressing diaphoretics were ill borne. In the relapses, a stimulating treatment was imperatively called for.

The post-mortem appearances in fatal cases of this fever were chiefly remarkable in being associated with or produced by purpurous extravasations, similar to those on the skin. These were found on the peritoneum, pleura, mucous membrane of the stomach, intestines, and bladder. Apoplectic effusions were also found on the lungs and in the substance of the muscles. On the mucous surfaces these blotches terminated in ulceration, which were of two kinds, one small and circular, with a disposition to granulate, the other sloughy, with fungous granulations similar to the spongy sanies of scorbutus. The liver was of normal size, mottled and friable; the spleen was generally enlarged; the kidneys sometimes presented purpuric spots; the heart's substance generally softened.

In alluding to the causes of this epidemic, Dr. Lalor hesitates to attribute it entirely to the effects of famine; but he admits that the purpuric or scorbutic character was associated from the date of the failure of the potato crop, and increased as destitution advanced. The fever appeared to be decidedly contagious.

Mr. Bottomley, of Croydon, has also published an account of fever as it appeared among the Irish labourers who had come into that part of the country to get up the harvest. The type of fever is shown to be the "simple continued," with tendency to typhoid depression. The writer states that there was no reason to believe it infectious, unless in the event of close crowding of the patients and inattention to ventilation.—(*Prov. Journal*, Dec. 29, 1848.)

Lastly, Dr. Orr has furnished a historical and statistical sketch of the epidemic fever in Glasgow; and, amongst other useful information, gives a vivid picture of the dangers which were encountered by the medical attendants. In one parish alone, seven out of seventeen surgeons took fever, three of whom died. In another district, containing seven surgeons, three perished. In all, no fewer than 117 persons, engaged in attending fever patients, contracted the disease, of which number 30 were ascertained to have died. (*Ed. Med. and Surgical Journal*, No. 175.)—*Ranking's Report on the Progress of Pract. Med.* in *Retrospect*, vol. vii.

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32. *Cold Douches in the Treatment of Intermittent Fever.*—M. Fleury has presented a memoir to the French Academy of Sciences, on the use of cold douches in ague. He was led to these researches by the assertion of Dr. Currie, that the accessions of ague might be prevented by the affusion of cold water, and that by its repetition four or five times, the disease might be entirely cured. M. Fleury has employed this means one or two hours before the expected paroxysm, in the form of a general douche, and in that of a local one to the region of the spleen.

The ends attained by the above plan he believes to be—1. A shock exerted on the nervous system, and on the general capillary circulation. 2. The opposing of a vigorous reaction and general stimulation of the surface to the cold stage of the fever. 3. A modification of the circulation of the spleen, combating congestion of that organ.

He has pursued this treatment in eleven cases of intermittent fever. In seven of them the disease was recent, and there had been but from three to seventeen paroxysms; quinine had not been administered in any one. In two cases, the spleen preserved its normal size; in five, it was enlarged: a cure was effected in all. In one, a single douche sufficed to cut short the fever. In two others, two affusions were necessary to do so, and to restore to the spleen its natural dimensions. In the remaining four, affusion was practiced three times.

In those patients where two or three douches were used, the effects produced were constantly the same. By the first application, the accession was retarded two or three hours; the rigors less violent, and shorter by one-half or five-sixths the time; the heat and headache were equally lessened; and the total duration of the fit was diminished by at least one-half. Age and the type of the fever did not exercise any appreciable influence over the effects of the treatment. Where, however, the volume of the spleen was larger, the time required for the cure was augmented. Four patients had suffered from the disease for from two to eleven months, having had several relapses, and resisted the action of sulphate of quinine, and presented the anæmia, emaciation, anorexia, &c., seen in those who have been long affected by ague. Three douches were required in two of these cases, and five in one other, to remove the fever; but from eight to eleven were necessary to cause the splenic engorgement and the cachectic symptoms to disappear. In one case the liver was very greatly enlarged; but this condition disappeared by perseverance with the affusions.

M. Fleury arrives at the following conclusions:—1. In the treatment of recent intermittent fever, simple, and with little or no engorgement of the spleen, cold douches may be substituted for quinine. 2. In the treatment of old-standing ague, where several relapses have occurred, and there is considerable enlargement of the spleen, or of the liver, with a cachectic condition, cold affusions are to be preferred to quinine; for they cut short the fever, restore the viscera to their natural volume, and remove the cachexy more rapidly and more safely than quinine; the latter, in large doses, not unfrequently acting injuriously upon the nervous system, or on the digestive organs. (*Bulletin des Academ., and Lancet.*)—*Ibid.*

SURGICAL PATHOLOGY AND THERAPEUTICS AND OPERATIVE SURGERY.

33. *The Question of Amputation in Gunshot Wounds.* By M. Malgaigne.—This question has formed the subject of a most interesting debate in the Academy of Medicine, Paris. MM. Roux and Baudens having concluded their communications,

M. Malgaigne observed, that the point towards which it was more especially his desire to call the attention of the Academy, was the treatment of fractures of the femur by war projectiles. It was a generally received opinion, more particularly promulgated by military surgeons, that such fractures required amputation. This was the practice of Ravaton, one of our great military authorities; Larrey, less exclusive than his predecessor, thought the extremity might be still preserved when the shot had only occasioned a simple fracture of the lower fourth or even third of the femur; but that all fractures occurring higher, in consequence of a gunshot wound, absolutely required amputation. M. Malgaigne then recalled the opinion of Ribes, who inclined towards considering all injuries of the femur, occasioned by musket balls, as cases for amputation. M. Malgaigne himself had adopted at one time this mode of thinking, and had applied it upon a field of battle; but the results were most unsatisfactory, and in the Polish campaign he had lost all the cases of amputation performed upon the thigh after gunshot wounds. On his return to France, M. Malgaigne had endeavoured to explain to himself this frightful mortality; and, on reading over the memoirs of M. Ribes, he was struck with an important fact, which that author honestly acknowledged:—"Out of 4000 invalided soldiers," said M. Ribes, "he had not found a single case of injury of the femur by shot. This was a proof, in his opinion, that all the men who had suffered from such wounds had died." But, on the other hand, amongst these 4000 cases, M. Ribes had not found a single case of amputation of the thigh—a fact which proved to M. Malgaigne that all these operations had been fatal, and that amputation did not afford more chances of preserving the lives of the wounded than the opposite practice.

On inquiring further into the details of the question, M. Malgaigne had arrived at this conclusion, that the same doubts might with justice be applied to all amputations performed in the treatment of injuries by war projectiles.

The question of immediate amputation might be said to be one of the most important points of modern surgery. In the ancient Academy of Surgery it was the object of a long debate; and Boucher had said that two-thirds of the cases of amputation terminated fatally.

After Fontenoy, out of 300 cases, Faure asserted that only thirty or forty were cured.

Bilguez states that, during the seven years' war, scarcely one or two cases had been saved out of numberless operations.